

CO2MVS RESEARCH ON SUPPLEMENTARY OBSERVATIONS



Analysis of the FFCO₂ emissions at national scale in Western Europe in 2024 and recommendations for the implementation of regional scale APO and ¹⁴CO₂ data assimilation in the CO2MVS

Due date of deliverable	31 December 2025
Submission date	16 December 2025
File Name	CORSO-D3.6
Work Package /Task	WP3 /3.3-3.4
Organisation Responsible of Deliverable	UNIVBRIS/WU
Author name(s)	H. Allen, J. Hooghiem, C. Gómez-Ortiz, E. Saboya, M. Rigby, I. Luijckx, G. Broquet, M. Scholze, A. Visser
Revision number	1.0
Status	Final
Dissemination Level / location	Public www.corso-project.eu



Funded by the
European Union

The CORSO project (grant agreement No 101082194) is funded by the European Union.

Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the Commission. Neither the European Union nor the granting authority can be held responsible for them.

1 Executive Summary

This Deliverable 3.6 has been merged with Deliverable 3.5 to deliver one overall consistent report. Please refer to D3.5 for more information.

1 Scope of this deliverable

1.1 Objectives of this deliverable

In Work Package 3, specifically tasks 3.3 and 3.4, the goals were to develop global and European scale multi-tracer or purely “fossil fuel CO₂” inverse modelling systems. These systems were used to assess the relevance of assimilating atmospheric ¹⁴CO₂ and O₂ or APO observations with atmospheric CO₂ data to disentangle the fossil fuel component from other CO₂ signals and derive fossil fuel emission estimates for several decades at continental scale, and for recent years in Europe at regional scales.

Given the strong connections between the regional and global scale inversion systems, and to strengthen the recommendations and conclusions, we have combined the results into a single deliverable report instead of two separate ones.

Please see D3.5 for more information.

1.2 Deviations and counter measures

With the agreement of the authors and Project Officer the Deliverable 3.6 has been merged with Deliverable 3.5, therefore please refer to D3.5 for the detailed report. The full titles of the two deliverables are:

Deliverable number	Title	Lead Beneficiary
D3.5	Estimates of the annual fossil fuel CO ₂ emissions at the continental to national scales over a decade and recommendations for the implementation of global scale APO and ¹⁴ CO ₂ data assimilation in the CO2MVS	WU
D3.6	Analysis of the FFCO ₂ emissions at national scale in Western Europe in 2024 and recommendations for the implementation of regional scale APO and ¹⁴ CO ₂ data assimilation in the CO2MVS	UNIVBRIS

1.3 Project partners who contributed to the report:

Partners	
COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES	CEA
WAGENINGEN UNIVERSITY	WU
UNIVERSITY OF LUND	ULUND
UNIVERSITY OF BRISTOL	UNIVBRIS
EUROPEAN CENTER FOR MEDIUM-RANGE WEATHER FORECASTS	ECMWF